

WHAT IS CLAIMED IS:

1 1. A light guiding plate manufacturing apparatus, which
2 manufactures a light guiding plate, comprising:

3 a cylindrical roller, which has a heater built-in, rotating
4 while fixing a stamper having a dot pattern formed on its
5 surface;

6 substrate fixing means which reciprocates at a lower side
7 of said cylindrical roller in accordance with rotation of said
8 cylindrical roller while fixing a resin substrate; and

9 pressing means for pressing with a constant pressure said
10 stamper, which is fixed to said cylindrical roller, onto a surface
11 of said resin substrate, which is fixed to said substrate fixing
12 means.

1 2. The light guiding plate manufacturing apparatus
2 according to claim 1, wherein said cylindrical roller is made of a
3 material having a higher thermal expansion coefficient than a
4 material forming of said stamper fixed to said cylindrical roller.

1 3. The light guiding plate manufacturing apparatus
2 according to claim 1, further comprising heating means for
3 heating in advance said resin substrate fixed to said substrate

4 fixing means, wherein when a temperature of deflection under
5 load of the fixing resin substrate fixed by said substrate fixing
6 means is set to T, said heating means heats said resin substrate to
7 temperature in the range of $(T \pm 20)^\circ\text{C}$ and said stamper fixed to
8 said cylindrical roller to temperature in the range of from no less
9 than $(T+10)^\circ\text{C}$ to no greater than $(T+30)^\circ\text{C}$.

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1 4. The light guiding plate manufacturing apparatus
2 according to claim 1, further comprising preheating means,
3 wherein when a temperature of deflection under load of the
4 fixing resin substrate fixed by said substrate fixing means is set
5 to T, said preheating means heats before said stamper is pressed
6 by said cylindrical roller in the vicinity of the surface of said
7 resin substrate to temperature in the range of $(T \pm 20)^\circ\text{C}$.

1 5. A light guiding plate manufacturing method, which
2 manufactures an light guiding plate, comprising the steps of:

3 fixing a stamper, having a dot pattern formed on its
4 surface, by a rotating cylindrical roller made of a material having
5 a higher thermal expansion coefficient than a material forming of
6 said stamper;

7 fixing a resin substrate by substrate fixing means, which
8 reciprocates at a lower side of said cylindrical roller in
9 accordance with the rotation of said cylindrical roller;

10 heating said resin substrate to temperature in the range of

11 (T±20)°C and said stamper to temperature in the range of from no
12 less than (T+10)°C to no greater than (T+30)°C when a
13 temperature of deflection under load of said resin substrate is set
14 to T; and
15 pressing said stamper with a constant pressure, which is
16 fixed to said cylindrical roller, onto a surface of said resin
17 substrate, which is fixed to said substrate fixing means.